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**INVENTOR(S):** David C. Gast

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**EXAMINER:** Marini, Matthew G.

**SUBJECT:** SCANNING A MEDIA STACK

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THE COMMISSIONER OF PATENTS  
ALEXANDRIA, VA 22313-1450

**APPELLANTS'/APPLICANTS' REPLY BRIEF**

The Appellants filed an appeal brief on July 23, 2008. The Examiner responded in an answer mailed September 18, 2008. The following is a reply to the Examiner's answer.

It is initially noted that the Examiner, when addressing the Appellant's opening brief, notes that the recited pattern is not part of the claimed structure and then proceeds to ignore the crux of the Appellant's argument. While the recited pattern is not part of the claimed structure, the component or components that decipher the pattern are. Thus where the pattern encodes certain data, the deciphering component or components are thus capable of deciphering that data. In the various claims, that data includes imaging data, an expected number of sheets, and parameter settings. Not one of the references cited by the Examiner teaches or suggests a component deciphers such information from a pattern.

**1. GROUNDS FOR REJECTION TO BE REVIEWED.**

- A. Claims 1, 2, 6, 8, 9, 11, and 18 stand rejected under 35 USC §102 as being anticipated by USPN 3,679,876 issued to Faith.
- B. Claims 3-7, 9, 10, 12-16, 19-23, and 25-27 stand rejected under 35 USC §103 as being unpatentable over USPN 6,335,084 issued to Biegelsen in view of Faith.

**2. ARGUMENT.**

**Grounds For Rejection A – Claims 1, 2, 6, 8, 9, 11, and 18 stand rejected as being anticipated by USPN 3,679,876 issued to Faith.**

**Claim 1** is directed to an apparatus that includes the following:

- 1. a tray for holding a media stack, the media stack having opposing faces joined by sides, a pattern being formed on at least one of the sides, each face being a face of a media sheet, the pattern including a plurality of sub-patterns, each sub-pattern being formed on a different subset of sheets in the media stack and encoding imaging data or a reference associated with the imaging data for the subset of sheets on which the sub-pattern is

- formed, the imaging data for at least one subset of sheets identifying an expected number of sheets in that subset;
2. a sensor;
  3. a transport mechanism to move the tray past the sensor to scan the sub-patterns; and
  4. control logic operable to communicate with the sensor to decipher the imaging data from the sub-patterns for each subset of sheets in the media stack.

In the opening brief, the Appellant explained that Faith fails to teach or suggest control logic operable to communicate with the sensor to decipher the imaging data from the sub-patterns for each subset of sheets in the media stack. Responding to the Appellant's arguments at page 13 of the Answer, the Examiner simply stated:

Regarding encoded imaging data or a reference associated with the image data within the pattern, the examiner would like to point out that the pattern is not part of the apparatus, but rather a part of the sheets used in the apparatus, and had been treated as intended use. As recited, the control logic responsible for deciphering the pattern does not tie in with what the deciphered pattern does to the apparatus itself, but rather simply states the sensor senses a pattern, where, indirectly, a control unit deciphers that data. Under this interpretation, Faith et al. teaches a pattern sensed by a sensor, where the sensor communicates with a control unit, and then the control unit deciphers the data within that subset of cards.

Examiner's Answer, page 13.

The Examiner's analysis ignores the express language of Claim 1. In particular, the recited control logic is configured to decipher "imaging data" from the sub-patterns. Faith describes a deck of punch cards that are used to program a computer. Faith, col. 1, lines 6-10. To function properly, that cards of the deck must be read in a proper sequence, thus, the cards must be properly ordered within the deck. See, e.g., Faith, Abstract. A magnetic stripe is formed on an edge of the deck. Faith, col. 1, lines 61-63. The magnetic stripe is used to record pulses such that each individual card has its own separate pulse combination recorded on its edge. Faith, col. 1, lines 65-68. The pulses on each card identify a prescribed position within the deck. Faith, col. 1, lines 67-70.

The magnetic stripe on the deck can then be read to ensure that all cards are present and in the proper order before being read into the computer. Faith, Abstract.

By contrast, each or the recited sub-patterns encodes imaging data or a reference associated with the imaging data for a particular subset of sheets. According to paragraph [0017] of the Specification, imaging data is “any information that can be used, at least indirectly, to configure an imaging device.” According to paragraph [0015], an imaging device is a device that is “capable of forming images on media” such as a sheet of paper.

Faith’s magnetic stripe encodes a position within a deck. The pulses do not encode imaging data. Therefore, reading the magnetic strip only serves to decipher the intended position of each card in Faith’s deck. The pulses on each of faith’s cards do not encode imaging data or a reference to imaging data. The information encoded by the pulses cannot be used to configure an imaging device. Faith’s magnetic strip is not read to decipher imaging data of any sort whatsoever.

For at least these reasons, the Appellant respectfully maintains that Faith fails to teach or suggest each and every limitation as presented in Claim 1. Thus, Claim 1 is patentable over faith as is Claim 2 which depends from Claim 1.

**Claim 6** is directed to a media source that includes the following:

1. a tray for holding a media stack, the media stack having opposing faces joined by sides, a pattern being formed on at least one of the sides, each face being a face of a media sheet, the pattern including a plurality of sub-patterns, each sub-pattern being formed on a different subset of sheets in the media stack and encoding imaging data or a reference associated with the imaging data for the subset of sheets on which the sub-pattern is formed, the imaging data for at least one subset of sheets identifying an expected number of sheets in that subset;
2. means for moving the tray between a first position and a second position;

3. means for scanning the sub-patterns as the tray is moved between the first position and the second position; and
4. a means for deciphering the imaging data from the sub-patterns for each subset of sheets in the media stack.

As with Claim 1, Faith fails to teach or suggest a means for deciphering the imaging data from the sub-patterns for each subset of sheets in the media stack. Instead, Faith only describes sequentially deciphering pulses from individual cards to determine if each card is properly positioned in a deck. For at least these reasons Claim 6 and Claims 7 and 8 which depend from Claim 6 are patentable over Faith.

**Claim 9** is directed to a data identification system and recites the following:

1. a tray for holding a media stack, the media stack the media stack having opposing faces joined by sides, a pattern being formed on at least one of the sides, each face being a face of a media sheet, the pattern including a plurality of sub-patterns, each sub-pattern being formed on a different subset of sheets in the media stack and encoding imaging data or a reference associated with the imaging data for the subset of sheets on which the sub-pattern is formed, the imaging data for at least one subset of sheets identifying an expected number of sheets in that subset;
2. a transport mechanism operable to move the tray between a first position and a second position;
3. a sensor positioned to scan the sub-patterns as the transport mechanism moves the tray between the first position and the second position; and
4. logic coupled to the sensor and operable to decipher the imaging data from the sub-patterns for each subset of sheets in the media stack.

As with Claim 1, Faith fails to teach or suggest logic coupled to the sensor and operable to decipher the imaging data from the sub-patterns for each subset of sheets

in the media stack. Faith only describes sequentially deciphering pulses from individual cards to determine if each card is properly positioned in a deck. For at least these reasons Claim 9 and Claims 7 and 8 which depend from Claim 6 are patentable over Faith.

For at least this reason, Claim 9 and Claims 10-16 and 18 which depend from Claim 9 are patentable over Faith.

**Grounds For Rejection B – Claims 3-7, 9, 10, 12-16, 19-23, and 25-27 stand rejected as being unpatentable over USPN 6,335,084 issued to Biegelsen in view of Faith.**

**Claim 3** is directed to a media source that includes the following:

1. a tray for holding a media stack, the media stack having opposing faces joined by sides, a pattern being formed on at least one of the sides, each face being a face of a media sheet, the pattern including a plurality of sub-patterns, each sub-pattern being formed on a different subset of sheets in the media stack and encoding imaging data or a reference associated with the imaging data for the subset of sheets on which the sub-pattern is formed, the imaging data for at least one subset of sheets identifying an expected number of sheets in that subset;
2. a transport mechanism operable to move the tray between a first position in which the media stack can be loaded onto the tray and a second position in which a sheet from the media stack loaded onto the tray can be fed into a print path of an imaging device;
3. a sensor positioned so that it can scan the sub-patterns as the transport mechanism moves the tray between the first and second positions; and
4. control logic operable to communicate with the sensor to decipher the imaging data from the sub-patterns for each subset of sheets in the media stack.

In the opening brief, the Appellant explained that Biegelsen and Faith fail to teach or suggest control logic operable to communicate with the sensor to decipher the **imaging data** from the sub-patterns for each subset of sheets in the media stack' where a given sub-pattern encodes information identifying an expected number of sheets in a subset. Responding to the Appellant's arguments at page 14 of the Answer, the Examiner simply stated:

Regarding the sub-pattern not containing an expected number of sheets in that subset of sheets, the examiner would like to point out that the pattern is not part of the apparatus, but rather a part of the sheets used in the apparatus, and has been treated as intended use. As recited, the control logic responsible for deciphering the pattern does not tie in with what the deciphered pattern does to the apparatus itself, but rather simply states the sensor senses a pattern, where, indirectly, a control unit deciphers that data. Under this interpretation, Biegelsen et al. teaches a pattern sensed by a sensor, where the sensor communicates with a control unit, and then the control unit deciphers the data within that subset of sheets.

While the sub-pattern itself is not part of the claimed media source, that media source includes control logic that is operable to communicate with the sensor to decipher the imaging data from the sub-patterns for each subset of sheets in the media stack. Further, the sub-pattern for at least one subset of sheets encode imaging data or a reference to imaging data that identifies an expected number of sheets in that subset. Thus, the recited control logic is operable to decipher the number of expected sheets in that subset.

Biegelsen describes a stack of media sheets 12. The pattern 20 is formed on an edge 18 of each sheet 20. Biegelsen, col. 3, lines 47-67 and Figs. 1 and 2. The pattern, as shown in Biegelsen's Fig. 7 is unique to each sheet – in other words – within a stack, consecutive sheets can have different patterns. Thus, the characteristics identified by a pattern 20 identify only the characteristics of the individual sheet 12 on which that pattern 20 is formed. As a consequence, Biegelsen' pattern 20 is not a "sub-pattern being formed on a different subset of sheets" that identifies "an expected

number of sheets in that subset.” Biegelsen’s code 20 is only useable to identify a characteristic of a given sheet. Biegelsen, col. 3, lines 51-54. Biegelsen defines the term characteristic” to include weight, stiffness, grain orientation, classification, a punch hole pattern, and orientation. Biegelsen, col. 4, lines 10-19. Thus, Biegelsen’s code or codes are not read to decipher the expected number of sheets in a subset of sheets.

Consequently, Biegelsen alone or combined with Faith fails to teach or suggest “control logic operable to communicate with the sensor to decipher the imaging data from the sub-patterns for each subset of sheets in the media stack’ where a given sub-pattern encodes information identifying an expected number of sheets in a subset. For at least this reason Claim 3 and Claims 4 and 5 which depend from Claim 3 are patentable over the cited references.

**Claim 6** is directed to a media source that includes the following:

1. a tray for holding a media stack, the media stack having opposing faces joined by sides, a pattern being formed on at least one of the sides, each face being a face of a media sheet, the pattern including a plurality of sub-patterns, each sub-pattern being formed on a different subset of sheets in the media stack and encoding imaging data or a reference associated with the imaging data for the subset of sheets on which the sub-pattern is formed, the imaging data for at least one subset of sheets identifying an expected number of sheets in that subset;
2. means for moving the tray between a first position and a second position;
3. means for scanning the sub-patterns as the tray is moved between the first position and the second position; and
4. a means for deciphering the imaging data from the sub-patterns for each subset of sheets in the media stack.

As with Claim 3, Biegelsen and Faith fail to teach or suggest a means for deciphering the imaging data from the sub-patterns for each subset of sheets in the



media stack' where a given sub-pattern encodes information identifying an expected number of sheets in a subset. For at least this reason Claim 6 and Claims 7 and 8 which depend from Claim 6 are patentable over the cited references.

**Claim 9** is directed to a data identification system and recites the following:

1. a tray for holding a media stack, the media stack the media stack having opposing faces joined by sides, a pattern being formed on at least one of the sides, each face being a face of a media sheet, the pattern including a plurality of sub-patterns, each sub-pattern being formed on a different subset of sheets in the media stack and encoding imaging data or a reference associated with the imaging data for the subset of sheets on which the sub-pattern is formed, the imaging data for at least one subset of sheets identifying an expected number of sheets in that subset;
2. a transport mechanism operable to move the tray between a first position and a second position;
3. a sensor positioned to scan the sub-patterns as the transport mechanism moves the tray between the first position and the second position; and
4. logic coupled to the sensor and operable to decipher the imaging data from the sub-patterns for each subset of sheets in the media stack.

As with Claim 3, Bieglesen and Faith fail to teach or suggest logic coupled to a sensor that is operable to decipher the imaging data from the sub-patterns for each subset of sheets in the media stack' where a given sub-pattern encodes information identifying an expected number of sheets in a subset. For at least this reason Claim 9 and Claims 10-16 and 18 which depend from Claim 9 are patentable over the cited references.

**Claim 13** depends from Claim 9 and recites that the imaging data for a given sub-pattern includes parameter settings for a corresponding subset of sheets, and the

control logic is operable to decipher the given sub-pattern to identify the parameter settings. With respect to Claim 13, the Appellant explained that Biegelsen and Faith fail to teach or suggest control logic that is operable to decipher the given sub-pattern to identify the parameter settings included in that sub-patterns. The Examiner responded at page 14 of the Answer:

In response to appellant's arguments of claim 13, specifically how Biegelsen et al. does not teach a sub-pattern which contains parameter settings, the examiner respectfully disagrees. Again, the examiner would like to point out that the pattern is not part of the apparatus, but rather a part of the sheets used in the apparatus, and has been treated as intended use. As recited, the control logic responsible for deciphering the pattern does not tie in with what the deciphered pattern does to the apparatus itself, but rather simply states the sensor senses a pattern, where, indirectly, a control unit deciphers that data. Under this interpretation, Biegelsen et al. teaches a pattern sensed by a sensor, where the sensor communicates with a control unit, and then the control unit deciphers the data within that subset of sheets.

Again, it is agreed that the sub-pattern itself is not an element of the claimed system, but the logic is and that logic is operable to decipher the given sub-pattern to identify the parameter settings. As noted, Biegelsen teaches that a code 20 formed on a sheet 12 can identify characteristics such as weight and grain orientation of the sheet 12. Biegelsen's code 20 does not include parameter settings. Instead, Biegelsen teaches that a user selects a media of a particular type. Biegelsen, col. 5, lines 4-8. Biegelsen's processor 28 then can adjust parameters according to type of media selected by the user. Biegelsen, col. 6, lines 36-38. In other words, Biegelsen's parameter settings are not included in the code. Instead, they are known to Biegelsen's processor 28.

Consequently Biegelsen fails to teach or suggest control logic that is operable to decipher the given sub-pattern to identify the parameter settings included in that sub-patterns. Faith is silent on this matter. For at least this additional reason, Claim 13 is patentable over the cited references.

**Claim 19** is directed to an imaging device and recites the following:

1. a print engine operable to form an image on a sheet of media;
2. a media source operable to supply a media stack, the media source including:
  - a. a tray for holding the media stack, the media stack having opposing faces joined by sides, a pattern being formed on at least one of the sides, each face being a face of a media sheet, the pattern including a plurality of sub-patterns, each sub-pattern being formed on a different subset of sheets in the media stack and encoding imaging data or a reference associated with the imaging data for the subset of sheets on which the sub-pattern is formed, the imaging data for at least one subset of sheets identifying an expected number of sheets in that subset;
  - b. a transport mechanism operable to move the tray between a first position and a second position;
  - c. a sensor positioned to scan the sub-patterns as the transport mechanism moves the tray between the first position and the second position;
3. a transfer mechanism operable to transfer sheets of media from the media source to the print engine;
4. control logic in communication with the media source, the print engine, and the transfer mechanism, the control logic operable to decipher the imaging data from the sub-patterns for each subset of sheets in the media stack and to control the operation of the print engine with respect to each subset of sheets according to the imaging data for that subset of sheets.

As with Claim 3, Bieglesen and Faith fail to teach or suggest control logic that is operable to decipher the imaging data from the sub-patterns for each subset of sheets in the media stack' where a given sub-pattern encodes information identifying an

expected number of sheets in a subset. For at least this reason, Claim 19 and Claims 20-25 which depend from Claim 19 are patentable over the cited references.

**Claim 21** depends from Claim 19 and recites a user interface in communication with the control logic and wherein the control logic is operable to cause the user interface to generate a display corresponding, at least indirectly, to the imaging data for one or more of the subsets of sheets. Addressing Claim 21, the Examiner cites Bieglesen, col. 5, lines 18-28. That passage mentions nothing of displaying parameter settings. Instead, it merely describes displaying a message indicating that a user selected media type is not available. Bieglesen, col. 5, lines 22-24.

For at least this additional reason, Claim 21 is patentable over the cited references.

**Claim 22** depends from Claim 21 which depends from Claim 19. Claim 22 recites that the control logic is operable to cause the user interface to generate a display that includes user selectable options corresponding, at least indirectly, to the imaging data for one or more of the subsets of sheets. Addressing Claim 21, the Examiner cites Bieglesen, col. 5, lines 18-28. That passage mentions nothing of displaying user selectable options corresponding to imaging data. Instead, it merely describes displaying a message indicating that a user selected media type is not available. Bieglesen, col. 5, lines 22-24.

For at least this additional reason, Claim 21 is patentable over the cited references.

**Claim 23** depends from Claim 19 and recites that:

1. the imaging data for a given sub-pattern includes imaging parameter settings;
2. the imaging device further comprising a user interface in communication with the control logic and capable of displaying information to a user; and

3. the control logic is operable to cause the user interface to display information corresponding to the imaging parameter settings the subset of sheets on which the given sub-pattern is imprinted.

As explained above with respect to Claim 13, Bieglesen and Faith fail to teach or suggest a sub-pattern that includes parameter settings. Thus, The references also fail to teach control logic that is operable to cause the user interface to display information corresponding to the imaging parameter settings. To support the rejection, the Examiner cites Bieglesen, col. 5, lines 18-28. That passage mentions nothing of displaying parameter settings. Instead, it merely describes displaying a message indicating that a user selected media type is not available. Bieglesen, col. 5, lines 22-24.

For at least this additional reason, Claim 23 is patentable over the cited references.

**Claim 26** is directed to an imaging device and recites the following:

1. a print engine operable to form an image on a sheet of media;
2. a first media source operable to supply a first media stack, the first media source including:
  - a. a first tray for holding the first media stack, the first media stack having opposing faces joined by sides, a first pattern being formed on at least one of the sides, each face being a face of a media sheet, the first pattern including a plurality of first sub-patterns, each first sub-pattern being formed on a different subset of sheets in the first media stack and encoding imaging data or a reference associated with the imaging data for the subset of sheets on which the first sub-pattern is formed, the imaging data for at least one subset of sheets in the first media stack identifying an expected number of sheets in that subset;

- b. a first transport mechanism operable to move the first tray between a first position and a second position;
  - c. a first sensor positioned to scan the first sub-patterns as the first transport mechanism moves the first tray between the first position and the second position;
- 3. a second media source operable to supply a second media stack, the second media source including:
  - a. a second tray for holding the second media stack, the second media stack having opposing faces joined by sides, a second pattern being formed on at least one of the sides, each face being a face of a media sheet, the second pattern including a plurality of second sub-patterns, each second sub-pattern being formed on a different subset of sheets in the second media stack and encoding imaging data or a reference associated with the imaging data for the subset of sheets on which the second sub-pattern is formed, the imaging data for at least one subset of sheets in the second media stack identifying an expected number of sheets in that subset;
  - b. a second transport mechanism operable to move the second tray between a third position and a fourth position;
  - c. a second sensor positioned to scan the second sub-patterns as the second transport mechanism moves the second tray between the third position and the fourth-positions;
- 4. a transfer mechanism operable to transfer sheets of media from the first and second media sources to the print engine;
- 5. control logic in communication with the first and second media sources, the print engine, and the transfer mechanism, the control logic operable to decipher the first and second sub-patterns to identify imaging data for each of the first subsets of sheets in the first media stack and second media data for each of the second subsets of sheets in the second media

stack and to control the operation of the transfer mechanism and to control the operation of the print engine so that the first imaging data for a given one of the subsets of sheets in the first media stack is used when a media sheet from that given subset of sheets from the first media stack is transferred from the first media source and the second imaging data for a given one of the subsets of sheets in the second media stack is used when a media sheet from that given subset of sheets from the second media stack is transferred from the second media source.

As with Claim 3, Biegelsen and Faith fail to teach or suggest control logic that is operable to decipher the imaging data from the sub-patterns for each subset of sheets in each media stack where a given sub-pattern encodes information identifying an expected number of sheets in a subset. For at least this reason, Claim 26 and Claim 27 which depends from Claim 26 are patentable over the cited references.

**Claim 27** depends from Claim 26 and recites a user interface in communication with the control logic, wherein the control logic is operable to cause the user interface to generate a display corresponding, at least indirectly, to the imaging data for the subsets of sheets in the first and second media stacks. Es previously explained, the only information displayed on Biegelsen's display 32 is a message indicating that a user selected media type is not available. Biegelsen, col. 5, lines 22-24.

For at least this additional reason, Claim 27 is patentable over the cited references.

**Conclusion:** In view of the foregoing remarks, the Applicant respectfully asks the Board to reverse the rejections.

Respectfully submitted,  
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